

09/516,194

(FILE 'HOME' ENTERED AT 09:16:31 ON 20 DEC 2000)

FILE 'CAPLUS' ENTERED AT 09:17:08 ON 20 DEC 2000

 E GARVEY DAVID/IN,AU
L1 84 S E1-7
L2 0 S GASTON RICKY/IN,AU
 E GASTON RICKY/IN,AU
L3 10 S E1-7
 E GASTON RICHARD/IN,AU
 E TEJADA INIGO/IN,AU
L4 2 S E5
 E TAM SANG/IN,AU
L5 24 S E2-8
 E WORCEL MANUEL/IN,AU
L6 48 S E3-4
L7 158 S L1 OR L3 OR L4 OR L5 OR L6
L8 64456 S PROSTAGLANDIN
L9 7 S L7 AND L8

L9 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 2000:814310 CAPLUS
 DOCUMENT NUMBER: 133:359255
 TITLE: Nitrosated and nitrosylated potassium channel activators, compositions, and methods of use
 INVENTOR(S): **Garvey, David S.**; Saenz De Tejada, Inigo
 PATENT ASSIGNEE(S): Nitromed, Inc., USA
 SOURCE: PCT Int. Appl., 112 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000067754	A1	20001116	WO 2000-US12957	20000512
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: US 1999-133888 19990512

AB The invention describes nitrosated and/or nitrosylated potassium channel activators, as well as compns. comprising at least one nitrosated and/or nitrosylated potassium channel activator and, optionally, at least one compd. that donates, transfers or releases nitric oxide, elevates endogenous levels of endothelium-derived relaxing factor, stimulates endogenous synthesis of nitric oxide, or is a substrate for nitric oxide synthase, and/or at least one vasoactive agent. The invention also provides compns. comprising at least one potassium channel activator and at least one compd. that donates, transfers or releases nitric oxide, elevates endogenous levels of endothelium-derived relaxing factor, stimulates endogenous synthesis of nitric oxide, or is a substrate for nitric oxide synthase, and/or at least one vasoactive agent. The invention further provides methods for treating or preventing sexual dysfunction in males and females, for enhancing sexual response in males and females, and for treating or preventing cardiovascular disorders, cerebrovascular disorders, hypertension, asthma, baldness, urinary incontinence, epilepsy, sleep disorders, gastrointestinal disorders, migraines, irritable bowel syndrome, and sensitive skin.

REFERENCE COUNT: 5

REFERENCE(S):

- (1) Anon; Bioorg Med Chem Lett 1997, V7(24), P3095 CAPLUS
- (2) Anon; J Pharmacol Exp Ther 1984, V229(3), P793 CAPLUS
- (3) Casselia Ag; DE 4420523 A1 1995 CAPLUS
- (4) Chugai Seiyaku K K; DE 2714713 A1 1977 CAPLUS
- (5) Yissum Research Development Company Of The Hebrew University Of Jerusalem; WO 9842661 A1 1998

CAPLUS

L9 ANSWER 2 OF 7 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 2000:725405 CAPLUS
 DOCUMENT NUMBER: 133:276362
 TITLE: Compositions and methods for preventing and treating sexual dysfunctions
 INVENTOR(S): **Garvey, David S.**; Schroeder, Joseph D.; Saenz de Tejada, Inigo
 PATENT ASSIGNEE(S): Nitromed, Inc., USA; Saenz De Tejada, Inigo
 SOURCE: PCT Int. Appl., 27 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000059304	A1	20001012	WO 2000-US6437	20000330
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: US 1999-285048 19990402

AB The present invention describes methods for preventing and treating sexual

dysfunctions in male and female patients by orally administering at least one .alpha.-adrenergic receptor antagonist and at least one compd. that elevates endogenous nitric oxide or endothelium-derived relaxing factor

in

vivo or is a substrate for nitric oxide synthase. The present invention also describes orally administrable compns. comprising at least one .alpha.-adrenergic receptor antagonist and at least one compd. that elevates endogenous nitric oxide or endothelium-derived relaxing factor

in

vivo or is a substrate for nitric oxide synthase. In the present invention, the .alpha.-adrenergic receptor antagonist is preferably yohimbine or phentolamine, and the compd. that elevates endogenous nitric oxide or endothelium-derived relaxing factor in vivo or is a substrate

for

nitric oxide synthase is preferably L-arginine. In preferred embodiments,

the present invention provides a sachet comprising an orally administrable

single dose compn. of L-arginine and/or a pharmaceutically acceptable salt

thereof and yohimbine and/or a pharmaceutically acceptable salt thereof. Patients with erectile dysfunction were treated orally with yohimbine hydrochloride and L-arginine glutamate.

REFERENCE COUNT:

6

REFERENCE(S):

- (1) Anon; US 5910316 A 1999 CAPLUS
- (2) Gioco; US 5565466 A 1996 CAPLUS
- (3) Lowrey, F; US 5731339 A 1998 CAPLUS

(4) Real 2000 Limited; WO 9901132 A1 1999 CAPLUS
 (6) Zorgniotti, A; Int J Impotence Res 1994, V6, P33
 MEDLINE
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 3 OF 7 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 2000:666601 CAPLUS
 DOCUMENT NUMBER: 133:256811
 TITLE: Pharmaceutical compositions containing dopamine
 agonists in combination with nitric oxide donors for
 treating and/or preventing sexual dysfunctions
 INVENTOR(S): Garvey, David S.
 PATENT ASSIGNEE(S): Nitromed, Inc., USA
 SOURCE: PCT Int. Appl., 48 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000054773	A1	20000921	WO 2000-US3709	20000310
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				

PRIORITY APPLN. INFO.: US 1999-123920 19990312

OTHER SOURCE(S): MARPAT 133:256811

AB The present invention is directed to novel compns. comprising at least

one

dopamine agonist in combination with at least one nitric oxide donor

(i.e.

compds. that donate, transfer or release nitric oxide, elevate endogenous levels of endothelium-derived relaxing factor, stimulate endogenous synthesis of nitric oxide or are substrates for nitric oxide synthase). The novel compns. may optionally comprise at least one therapeutic agent, such as, a vasoactive agent, an antiemetic agent, and mixts. thereof.

The

dopamine agonist is preferably apomorphine. The present invention is

also

directed to methods for treating and/or preventing sexual dysfunctions and/or enhancing sexual responses in patients. In other embodiments, the present invention is directed to methods treating or preventing neurodegenerative diseases, mitochondrial diseases, spinal cord injury, central or psychostimulant addiction, senile dementia, circulatory disorders, cardiovascular disorders, hyperprolactinemia or myopia. The compds. and/or compns. of the present invention can also be provided in the form of a pharmaceutical kit (no data).

REFERENCE COUNT: 4

REFERENCE(S): (1) Cooke; US 5891459 A 1999 CAPLUS
 (2) El-Rashid, Y; US 5770606 A 1998 CAPLUS

(3) Schoenleber; US 4963568 A 1990 CAPLUS
 (4) The United States Of America; WO 9632118 A 1996
 CAPLUS

L9 ANSWER 4 OF 7 CAPLUS COPYRIGHT 2000 ACS
 ACCESSION NUMBER: 2000:628113 CAPLUS
 DOCUMENT NUMBER: 133:222496
 TITLE: Nitrosated and nitrosylated **prostaglandins**,
 compositions and methods of use
 INVENTOR(S): **Garvey, David S.**; Gaston, Ricky D.; Saenz de
 Tejada, Inigo; Tam, Sang William; Worcel, Manuel;
 Letts, Gordon L.
 PATENT ASSIGNEE(S): Nitromed, Inc., USA
 SOURCE: PCT Int. Appl., 82 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000051978	A1	20000908	WO 2000-US5286	20000301
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
PRIORITY APPLN. INFO.:			US 1999-122273	19990301
			US 1999-138502	19990609

OTHER SOURCE(S): MARPAT 133:222496
 AB Novel nitrosated and/or nitrosylated **prostaglandins** I (R1 = OD1,
 Cl; R2, R8 = H, R1R2 = CH2, O; R3, R4 = H, OD1, Me; R5, R6 = H, OD1, Me,
 MeO, CH:CH2; R7 = H, OD1; R9 = H, allene functionality, R8R9 may form a
 benzene ring when R1 is a O atom; A = CH, CH2, S, O; B = CH, CH2, S, CO;
 X = CH2OR11, CO2R11, COND1R12; R11 = D1, alkyl, p-benzamidophenyl; R12 =
 SO2Me, COMe; Z = Et, Bu, hexyl, benzyl, etc; D1 = H, D; D = NO, NO2, etc)
 were prep'd., and novel compns. were prep'd. comprising at least one
 nitrosated and/or nitrosylated **prostaglandin**, and, optionally,
 at least one compd. that donates, transfers or releases nitric oxide,
 elevates endogenous levels of endothelium-derived relaxing factor,
 stimulates endogenous synthesis of nitric oxide or is a substrate for
 nitric oxide synthase, and/or at least one vasoactive agent. The novel
 compns. contained at least one **prostaglandin** and at least one
 S-nitrosothiol compd., and, optionally, at least one vasoactive agent.
 The **prostaglandin** is preferably a **prostaglandin** E1
 compd., more preferably alprostadil, and the S-nitrosothiol compd. is
 preferably S-nitrosoglutathione. The present invention also provides
 methods for treating or preventing sexual dysfunctions in males and
 females, for enhancing sexual responses in males and females, and for
 treating or preventing cerebrovascular disorders, cardiovascular
 disorders, benign prostatic hyperplasia (BPH), glaucoma, peptic ulcers or

for inducing abortions. Thus, (2S,3S)-2,3,4-tris(nitroxy)butan-1-ol, prep'd. in 5 steps from (4S,5S)-4,5-bis(hydroxymethyl)-2,2-dimethyl-1,3-dioxolane, was treated with
 7-[5-((1E)(3S)-3-hydroxyoct-1-enyl)(1R,4R,5R)-
 4-hydroxy-2-oxocyclopentyl]heptanoic acid to give (2S,3S)-2,3,4-tris(nitroxy)butyl
 7-[5-((1E)(3S)-3-hydroxyoct-1-enyl)(1R,4R,5R)-4-hydroxy-
 2-oxocyclopentyl]heptanoate.

REFERENCE COUNT: 2

REFERENCE(S): (1) Morozowich; US 3922293 A 1975 CAPLUS
 (2) Nicox S A; WO 9858910 A2 1998 CAPLUS

L9 ANSWER 5 OF 7 CAPLUS COPYRIGHT 2000 ACS

ACCESSION NUMBER: 1997:532196 CAPLUS

DOCUMENT NUMBER: 127:200050

TITLE: Nitrosated and nitrosylated .alpha.-adrenergic receptor antagonist compounds, preparation thereof, compositions containing them, and use in treatment of human impotence or erectile dysfunction

INVENTOR(S): **Garvey, David S.**; Schroeder, Joseph D.; Saenz De Tejada, Inigo

PATENT ASSIGNEE(S): Nitromed, Inc., USA; Garvey, David S.; Schroeder, Joseph D.; Saenz De Tejada, Inigo

SOURCE: PCT Int. Appl., 96 pp.
 CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9727749	A1	19970807	WO 1997-US1294	19970128
W: AU, CA, IL, JP, US				
RW: AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
US 5932538	A	19990803	US 1996-595732	19960202
US 5994294	A	19991130	US 1996-714313	19960918
AU 9717562	A1	19970822	AU 1997-17562	19970128
AU 721247	B2	20000629		
JP 2000505424	T2	20000509	JP 1997-527755	19970128
EP 1018879	A1	20000719	EP 1997-904887	19970128
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI				
PRIORITY APPLN. INFO.:			US 1996-595732	19960202
			US 1996-714313	19960918
			WO 1997-US1294	19970128

OTHER SOURCE(S): MARPAT 127:200050

AB Disclosed are nitrosated and nitrosylated .alpha.-adrenergic receptor antagonists; compns. of an .alpha.-adrenergic receptor antagonist optionally substituted with .gtoreq.1 NO or NO₂ moiety, and a compd. that donates, transfers, or releases nitric oxide as a charged species, i.e., nitrosonium or nitroxyl, or as the neutral species, nitric oxide; and uses

for each of them in treating human impotence or erectile dysfunction.

Prepn. of compds. of the invention, e.g.

N-(N-L-.gamma.-glutamyl-S-nitroso-

09/516,194

L-cysteinyl)glycine and 4-[2-(dimethylamino)ethoxy]-2-methyl-5-(1-methylethyl)phenol-(3-S-nitroso-3-methylbutyric acid)ester. The effect of selected compds. on erectile response in rabbits was detd.

L9 ANSWER 6 OF 7 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1996:519680 CAPLUS
DOCUMENT NUMBER: 125:186485
TITLE: Prostanoid production in rabbit corpus cavernosum: I
Regulation by oxygen tension
AUTHOR(S): Daley, Jennifer T.; Brown, Michael L.; Watkins, Michael T.; Traish, Abdulkaged M.; Huang, Yue-Hua; Moreland, Robert B.; **Tejada, Inigo Saenz De**
CORPORATE SOURCE: School Medicine, Boston University, Boston, MA, USA
SOURCE: J. Urol. (Baltimore) (1996), 155(4), 1482-1487
CODEN: JOURAA; ISSN: 0022-5347
DOCUMENT TYPE: Journal
LANGUAGE: English

AB The effects of oxygen tension on prostanoid synthesis in rabbit penile corpus cavernosum tissue (RCC) in organ culture were investigated.

Strips of rabbit corpus cavernosum were incubated in organ culture media under varying oxygen conditions (0%, 12% and 21% oxygen), in the presence or absence of acetylcholine and arachidonate stimulation. Prostanoids were measured in collected media by RIA. **Prostaglandin H synthase** (PGHS) protein levels and mRNA PGHS expression were measured under both

0% and 21% oxygen conditions. Basal and acetylcholine-stimulated PGI2 release was progressively diminished as a function of diminishing oxygen tension (pO2 from .apprx. 165 to 25 mm.Hg). The basal and stimulated prodn. of other prostanoids, thromboxane A2, PGF2.alpha. and PGE2, was also significantly inhibited under 0% oxygen (.apprx. 25 mm.Hg) conditions. However, incubation under 0% oxygen did not alter PGHS protein levels nor mRNA PGHS expression. Cavernosal strips incubated under 0% oxygen but supplemented with exogenous arachidonate (10 .mu.M.) maintained significantly lower PGI2 prodn. than tissues exposed to 21% oxygen (.apprx. 165 mm.Hg). These data demonstrate that oxygen tension regulates **prostaglandin** prodn. in corporal tissue. The redn. in prostanoid prodn. during hypoxia can be attributed to inhibition of PGHS activity rather than the expression of the enzyme. In view of the role

of PGI2 as an inhibitor of platelet aggregation and white cell-endothelial adhesion, our findings may provide mechanistic insight into the alteration in corporal blood homeostasis during ischemic hypoxic priapism.

L9 ANSWER 7 OF 7 CAPLUS COPYRIGHT 2000 ACS
ACCESSION NUMBER: 1977:65423 CAPLUS
DOCUMENT NUMBER: 86:65423
TITLE: Calcium uptake by myometrial membranes: effect of A 23187, a calcium ionophore
AUTHOR(S): Rangachari, P. Kumar; Pernollet, Marie G.; **Worcel, Manuel**
CORPORATE SOURCE: Unite Rech. Physiol. Pharmacol., Vasc. Renale, Hop. Necker, Paris, Fr.
SOURCE: Eur. J. Pharmacol. (1976), 40(2), 291-4
CODEN: EJPHAZ

DOCUMENT TYPE: Journal
LANGUAGE: English

AB A subcellular fraction, relatively enriched with plasma membranes, showed an ATP-dependent Ca²⁺ uptake. The addn. of a Ca²⁺ ionophore, A 23187 [52665-69-7], greatly reduced the steady-state uptake of Ca²⁺ and also led to release of previously accumulated Ca²⁺. Other drugs (angiotensin, **prostaglandin F2.alpha.**, 5-hydroxytryptamine and cyclic nucleotides) had negligible effects on Ca²⁺ transport. The prepn. appears to transport Ca²⁺, although binding is negligible.